UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 15, 2022

Richard W. Boyle
Radioactive Materials Branch
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, D.C. 20590

SUBJECT: REQUEST FOR REVALIDATION OF UNITED KINGDOM CERTIFICATE OF APPROVAL GB/4120/B(U) FOR THE DPR 200 PACKAGE – REQUEST FOR ADDITIONAL INFORMATION, DOCKET 71-3102

Dear Richard Boyle:

By letter dated May 4, 2022 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML22203A081), the U.S. Department of Transportation requested that the U.S. Nuclear Regulatory Commission staff perform a review of the United Kingdom Certificate of Approval GB/4120/B(U), for the Model No. DPR 200 transport package and make a recommendation concerning the revalidation of the package for import and export use.

In connection with our review, this letter is to advise you that the information needed to continue our review, described as a request for additional information, is in the enclosure to this letter. Addressing the request for additional information does not preclude the staff from issuing further requests for additional information during the detailed technical review of this application.

In order to complete our technical review on schedule, your response should be provided within 30 days of the date of this letter. If you have any questions regarding this matter, I may be contacted at (301) 415-5196 or via email at Nishka.Devaser@nrc.gov.

Sincerely,

Signed by Devaser, Nishka
on 12/15/22

Nishka Devaser, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-3102
EPID L-2022-DOT-0003

Enclosure:
Request for Additional Information

SUBJECT: REQUEST FOR REVALIDATION OF UNITED KINGDOM CERTIFICATE OF APPROVAL GB/4120/B(U) FOR THE DPR 200 PACKAGE – REQUEST FOR ADDITIONAL INFORMATION, DOCKET 71-3102 DATED: December 15, 2022

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Request for Additional Information
Docket No. 71-3102
Model No. DPR 200 Package
United Kingdom Certificate GB/4120/B(U)

By letter dated May 4, 2022 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML22203A081), the U.S. Department of Transportation requested that the U.S. Nuclear Regulatory Commission (NRC) staff perform a review of the United Kingdom Certificate of Approval GB/4120/B(U), for the Model No. DPR 200 transport package and make a recommendation concerning the revalidation of the package for import and export use.

This request for additional information identifies information needed by the NRC staff (the staff) in connection with its technical review of the Model No. DPR 200 package application.

Containment Evaluation

4-1 Clarify the leakage criteria for the DPR 200 package and whether the DPR 200 package is considered "leaktight" under the American National Standards Institute (ANSI) N14.5 or International Organization for Standardization (ISO) 12807 definition of the term. For non-spent fuel contents, describe how the package user demonstrates that the package meets the criteria in International Atomic Energy Agency SSR-6, Paragraph 671(a).

Section 6.7 of Report SR-030: *DPR 200 Containment Safety Assessment* is entitled: "Leaktightness". In this section the applicant states:

> *The containment system must be capable of retaining solid radioactive material which, in the worst case, could mean a fine powder. Para[graph] 659.13, SSG-26, quotes a helium leak rate of 10^{-6} Pa·m^3/s as being sufficient to retain "even the smallest particle size powder". This is therefore the criteria used in testing the containment boundary and the seals.*

The staff notes that the helium leak rate cited above is greater than the "leaktight" criteria defined in ANSI N14.5-2014 (or the corresponding ISO 12807 standard) which defines "leaktight" as demonstration of a leakage rate less than or equal to $1E10^{-7}$ ref·cm^3/s, which is equivalent to $1E10^{-8}$ Pa·m^3/s. If the package is not "leaktight" a demonstration that the package meets the radioactive release limits in SSR-6 Paragraph 671(a) will need to be provided.

This information is needed to determine compliance with SSR-6 Paragraphs 659 and 671(a).